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## (54) CYLINDRICAL TYPE SOLID ELECTROLYTIC FUEL CELL

### (57)Abstract:

**PURPOSE:** To improve volume efficiency to obtain a cylindrical type SOFC of a good efficiency by composing a unit cell of a cylindrical type of an air pole, a fuel pole, an electrolyte, and inter connectors, and forming these cells in a multi-tube structure.

**CONSTITUTION:** The titled fuel cell is composed of a cylindrical type unit cell 11, and cylindrical type unit cells 12, 13 disposed concentrically inside the cell 11 in this order and of smaller diameters than the diameter of the cell 11. The cells 11, 12, 13 are provided with a fuel pole 2, a solid electrolyte 3, an air pole 4, and an inter connector for connecting the fuel pole 2 with the air pole 4 directly. Fuel gas F supplied from a fuel supply tube 14 is let through between the cell 11 and the cell 12, and through the inside of the cells, and air A supplied from an air supply tube 15 is let through between the cell 12 and the cell 13. Useless space in a supporting tube can thus be used effectively, and adjustment of a generation voltage can be achieved easily by connecting the cells 11~13 with each other as desired.

